SEQUENCE LISTING

- <110> Wei, Zhong-Min Leon, Ernesto Oviedo, Agustin
- <120> METHODS OF INHIBITING DESICCATION OF CUTTINGS REMOVED FROM ORNAMENTAL PLANTS
- <130> 21829/111
- <140>
- <141>
- <150> 60/248,169
- <151> 2000-11-13
- <160> 14
- <170> PatentIn Ver. 2.1
- <210> 1
- <211> 338
- <212> PRT
- <213> Erwinia chrysanthemi
- <400> 1
- Met Gln Ile Thr Ile Lys Ala His Ile Gly Gly Asp Leu Gly Val Ser

 1 5 10 15
- Gly Leu Gly Ala Gln Gly Leu Lys Gly Leu Asn Ser Ala Ala Ser Ser 20 25 30
- Leu Gly Ser Ser Val Asp Lys Leu Ser Ser Thr Ile Asp Lys Leu Thr 35 40 45
- Ser Ala Leu Thr Ser Met Met Phe Gly Gly Ala Leu Ala Gln Gly Leu 50 55 60
- Gly Ala Ser Ser Lys Gly Leu Gly Met Ser Asn Gln Leu Gly Gln Ser 65 70 75 80
- Phe Gly Asn Gly Ala Gln Gly Ala Ser Asn Leu Leu Ser Val Pro Lys 85 90 95
- Ser Gly Gly Asp Ala Leu Ser Lys Met Phe Asp Lys Ala Leu Asp Asp 100 105 110

Leu Leu Gly His Asp Thr Val Thr Lys Leu Thr Asn Gln Ser Asn Gln
115 120 125

Leu Ala Asn Ser Met Leu Asn Ala Ser Gln Met Thr Gln Gly Asn Met 130 135 140

Asn Gly Leu Gly Gln Ser Met Ser Gly Phe Ser Gln Pro Ser Leu Gly 165 170 175

Ala Gly Gly Leu Gln Gly Leu Ser Gly Ala Gly Ala Phe Asn Gln Leu 180 185 190

Gly Asn Ala Ile Gly Met Gly Val Gly Gln Asn Ala Ala Leu Ser Ala 195 200 205

Leu Ser Asn Val Ser Thr His Val Asp Gly Asn Asn Arg His Phe Val 210 215 220

Asp Lys Glu Asp Arg Gly Met Ala Lys Glu Ile Gly Gln Phe Met Asp 225 230 235 240

Gln Tyr Pro Glu Ile Phe Gly Lys Pro Glu Tyr Gln Lys Asp Gly Trp
245 250 255

Ser Ser Pro Lys Thr Asp Asp Lys Ser Trp Ala Lys Ala Leu Ser Lys 260 265 270

Pro Asp Asp Gly Met Thr Gly Ala Ser Met Asp Lys Phe Arg Gln 275 280 285

Ala Met Gly Met Ile Lys Ser Ala Val Ala Gly Asp Thr Gly Asn Thr 290 295 300

Asn Leu Asn Leu Arg Gly Ala Gly Gly Ala Ser Leu Gly Ile Asp Ala 305 310 315 320

Ala Val Val Gly Asp Lys Ile Ala Asn Met Ser Leu Gly Lys Leu Ala 325 330 335

Asn Ala

<210> 2 <211> 2141

<212> DNA <213> Erwinia chrysanthemi

<400> 2 cgattttacc cgggtgaacg tgctatgacc gacagcatca cggtattcga caccgttacg 60 gegtttatgg cegegatgaa eeggeateag geggegeget ggtegeegea ateeggegte 120 gatctggtat ttcagtttgg ggacaccggg cgtgaactca tgatgcagat tcagccgggg 180 cagcaatate eeggeatgtt gegeaegetg etegetegte gttateagea ggeggeagag 240 tgcgatggct gccatctgtg cctgaacggc agcgatgtat tgatcctctg gtggccgctg 300 ccgtcggatc ccggcagtta tccgcaggtg atcgaacgtt tgtttgaact ggcgggaatg 360 acgttgccgt cgctatccat agcaccgacg gcgcgtccgc agacagggaa cggacgcgcc 420 cgatcattaa gataaaggcg gctttttta ttgcaaaacg gtaacggtga ggaaccgttt 480 caccgtcggc gtcactcagt aacaagtatc catcatgatg cctacatcgg gatcggcgtg 540 ggcatccgtt gcagatactt ttgcgaacac ctgacatgaa tgaggaaacg aaattatgca 600 aattacgatc aaagegeaca teggeggtga tttgggegte teeggtetgg ggetgggtge 660 tcagggactg aaaggactga attccgcggc ttcatcgctg ggttccagcg tggataaact 720 gagcagcacc atcgataagt tgacctccgc gctgacttcg atgatgtttg gcggcgcgct 780 ggcgcagggg ctgggcgcca gctcgaaggg gctggggatg agcaatcaac tgggccagtc 840 tttcggcaat ggcgcgcagg gtgcgagcaa cctgctatcc gtaccgaaat ccggcggcga 900 tgcgttgtca aaaatgtttg ataaagcgct ggacgatctg ctgggtcatg acaccgtgac 960 caagetgact aaccagagea accaactgge taatteaatg etgaaegeea geeagatgae 1020 ccagggtaat atgaatgcgt tcggcagcgg tgtgaacaac gcactgtcgt ccattctcgg 1080 caacggtctc ggccagtcga tgagtggctt ctctcagcct tctctggggg caggcggctt 1140 gcagggcctg agcggcgcg gtgcattcaa ccagttgggt aatgccatcg gcatgggcgt 1200 ggggcagaat gctgcgctga gtgcgttgag taacgtcagc acccacgtag acggtaacaa 1260 ccgccacttt gtagataaag aagatcgcgg catggcgaaa gagatcggcc agtttatgga 1320 tcagtatccg gaaatattcg gtaaaccgga ataccagaaa gatggctgga gttcgccgaa 1380 gacggacgac aaatcctggg ctaaagcgct gagtaaaccg gatgatgacg gtatgaccgg 1440 cgccagcatg gacaaattcc gtcaggcgat gggtatgatc aaaagcgcgg tggcgggtga 1500 taccggcaat accaacctga acctgcgtgg cgcgggcggt gcatcgctgg gtatcgatgc 1560 ggctgtcgtc ggcgataaaa tagccaacat gtcgctgggt aagctggcca acgcctgata 1620 atctgtgctg gcctgataaa gcggaaacga aaaaagagac ggggaagcct gtctcttttc 1680 ttattatgcg gtttatgcgg ttacctggac cggttaatca tcgtcatcga tctggtacaa 1740 acgcacattt tecegtteat tegegtegtt acgegeeaca ategegatgg catetteete 1800 gtcgctcaga ttgcgcggct gatggggaac gccgggtgga atatagagaa actcgccggc 1860 cagatggaga cacgtctgcg ataaatctgt gccgtaacgt gtttctatcc gcccctttag 1920 cagatagatt gcggtttcgt aatcaacatg gtaatgcggt tccgcctgtg cgccggccgg 1980 gatcaccaca atattcatag aaagctgtct tgcacctacc gtatcgcggg agataccgac 2040 aaaatagggc agtttttgcg tggtatccgt ggggtgttcc ggcctgacaa tcttgagttg 2100 gttcgtcatc atctttctcc atctgggcga cctgatcggt t 2141

<210> 3

<211> 403

<212> PRT

<213> Erwinia amylovora

<400> 3

Met Ser Leu Asn Thr Ser Gly Leu Gly Ala Ser Thr Met Gln Ile Ser Ile Gly Gly Ala Gly Gly Asn Asn Gly Leu Leu Gly Thr Ser Arg Gln Asn Ala Gly Leu Gly Gly Asn Ser Ala Leu Gly Leu Gly Gly Gly Asn Gln Asn Asp Thr Val Asn Gln Leu Ala Gly Leu Leu Thr Gly Met Met Met Met Ser Met Gly Gly Gly Gly Leu Met Gly Gly Leu Gly Gly Gly Leu Gly Asn Gly Leu Gly Gly Ser Gly Gly Leu Gly Glu Gly Leu Ser Asn Ala Leu Asn Asp Met Leu Gly Gly Ser Leu Asn Thr Leu Gly Ser Lys Gly Gly Asn Asn Thr Thr Ser Thr Thr Asn Ser Pro Leu Asp Gln Ala Leu Gly Ile Asn Ser Thr Ser Gln Asn Asp Asp Ser Thr Ser Gly Thr Asp Ser Thr Ser Asp Ser Ser Asp Pro Met Gln Gln Leu Leu Lys Met Phe Ser Glu Ile Met Gln Ser Leu Phe Gly Asp Gly Gln Asp Gly Thr Gln Gly Ser Ser Ser Gly Gly Lys Gln Pro Thr Glu Gly Glu Gln Asn Ala Tyr Lys Lys Gly Val Thr Asp Ala Leu Ser Gly Leu Met Gly Asn Gly Leu Ser Gln Leu Leu Gly Asn Gly Gly Leu Gly Gly Gly Gln Gly Gly Asn Ala Gly Thr Gly Leu Asp Gly Ser Ser Leu Gly Gly Lys Gly Leu Gln Asn Leu Ser Gly Pro Val Asp Tyr Gln Gln

```
Leu Gly Asn Ala Val Gly Thr Gly Ile Gly Met Lys Ala Gly Ile Gln
                                 265
            260
                                                      270
Ala Leu Asn Asp Ile Gly Thr His Arg His Ser Ser Thr Arg Ser Phe
        275
                             280
                                                  285
Val Asn Lys Gly Asp Arg Ala Met Ala Lys Glu Ile Gly Gln Phe Met
                         295
                                             300
Asp Gln Tyr Pro Glu Val Phe Gly Lys Pro Gln Tyr Gln Lys Gly Pro
                    310
                                         315
Gly Gln Glu Val Lys Thr Asp Asp Lys Ser Trp Ala Lys Ala Leu Ser
                325
                                     330
                                                          335
Lys Pro Asp Asp Asp Gly Met Thr Pro Ala Ser Met Glu Gln Phe Asn
            340
                                 345
                                                     350
Lys Ala Lys Gly Met Ile Lys Arg Pro Met Ala Gly Asp Thr Gly Asn
        355
                            360
                                                 365
Gly Asn Leu Gln Ala Arg Gly Ala Gly Gly Ser Ser Leu Gly Ile Asp
    370
                        375
                                             380
Ala Met Met Ala Gly Asp Ala Ile Asn Asn Met Ala Leu Gly Lys Leu
385
                    390
                                         395
                                                              400
```

<210> 4

<211> 1288

Gly Ala Ala

<212> DNA

<213> Erwinia amylovora

<400> 4

aagcttegge atggeacgtt tgaccgttg gteggeagg taegtttgaa ttatteataa 60 gaggaataeg ttatgagtet gaataeaagt gggetgggag egteaaegat geaaatttet 120 ateggeggtg eggeegaa taaegggttg etgggtaeea gtegeeagaa tgetgggttg 180 ggtggeaatt etgeactggg getgggegge ggtaateaaa atgataeegt eaateagetg 240 getggettae teaeeggeat gatgatgatg atgageatga tgggeggtgg tgggetgatg 300 ggeggtgget taggeeggtg ettaggtaat ggettgggtg geteaggtgg eetgggegaa 360 ggaetgtega aegegetgaa egatatgtta ggeggttege tgaaeaeget gggetegaaa 420 ggeggeaaea ataeeaette aaeaaeaaat teeeeggtgg aeeaggeget gggtattaae 480 teaaegtee agetgetgaa gatgtteage gagataatge aaageetgtt tggtgatggg 600 eaagatggea eeeaggeag tteetetggg ggeaageage egaeegaagg egageagaa 660

gcctataaaaaaggagtcactgatgcgctgtcgggcctgatgggtaatggtctgagccag720ctccttggcaacgggggactgggaggtggtcagggcggtaatgctggcacgggtcttgac780ggttcgtcgctgggcggcaaaggctgcaaaacctgagcgggccggtggactaccagcag840ttaggtaacgccgtgggtaccggtatcggtatgaaagcgggcattcaggcgctgaatgat900atcggtacgcacaggcacagttcaacccgttctttcgtcaataaaggcgatcgggcgatg960gcgaaaggaaatcggtcagtacatggaccagtatcctgaggtgtttggcaagccgcagtac1020cagaaaggcccgggtcaggaggtgaaaaccgatatggacagttcaacaaagccactgagc1140atgatcaaaaggcccatggctgatgccatgatggccggtaatgccattaacaatatggca1260cttggcaagctgggcgcgcttaagctttgagccggtgatgccattaacaatatggca1288

<210> 5

<211> 447

<212> PRT

<213> Erwinia amylovora

<400> 5

Met Ser Ile Leu Thr Leu Asn Asn Asn Thr Ser Ser Ser Pro Gly Leu

1 5 10 15

Phe Gln Ser Gly Gly Asp Asn Gly Leu Gly Gly His Asn Ala Asn Ser 20 25 30

Ala Leu Gly Gln Gln Pro Ile Asp Arg Gln Thr Ile Glu Gln Met Ala 35 40 45

Gln Leu Leu Ala Glu Leu Leu Lys Ser Leu Leu Ser Pro Gln Ser Gly 50 55 60

Asn Ala Ala Thr Gly Ala Gly Gly Asn Asp Gln Thr Thr Gly Val Gly 65 70 75 80

Asn Ala Gly Gly Leu Asn Gly Arg Lys Gly Thr Ala Gly Thr Thr Pro 85 90 95

Gln Ser Asp Ser Gln Asn Met Leu Ser Glu Met Gly Asn Asn Gly Leu
100 105 110

Asp Gln Ala Ile Thr Pro Asp Gly Gln Gly Gly Gln Ile Gly Asp 115 120 125

Asn Pro Leu Leu Lys Ala Met Leu Lys Leu Ile Ala Arg Met Met Asp 130 135 140

Gly Gln Ser Asp Gln Phe Gly Gln Pro Gly Thr Gly Asn Asn Ser Ala 145 150 155 160

Ser	Ser	Gly	Thr	Ser 165	Ser	Ser	Gly	Gly	Ser 170	Pro	Phe	Asn	Asp	Leu 175	Ser
Gly	Gly	Lys	Ala 180	Pro	Ser	Gly	Asn	Ser 185	Pro	Ser	Gly	Asn	Tyr 190	Ser	Pro
Val	Ser	Thr 195	Phe	Ser	Pro	Pro	Ser 200	Thr	Pro	Thr	Ser	Pro 205	Thr	Ser	Pro
Leu	Asp 210	Phe	Pro	Ser	Ser	Pro 215	Thr	Lys	Ala	Ala	Gly 220	Gly	Ser	Thr	Pro
Val 225	Thr	Asp	His	Pro	Asp 230	Pro	Val	Gly	Ser	Ala 235	Gly	Ile	Gly	Ala	Gly 240
Asn	Ser	Val	Ala	Phe 245	Thr	Ser	Ala	Gly	Ala 250	Asn	Gln	Thr	Val	Leu 255	His
Asp	Thr	Ile	Thr 260	Val	Lys	Ala	Gly	Gln 265	Val	Phe	Asp	Gly	Lys 270	Gly	Gln
Thr	Phe	Thr 275	Ala	Gly	Ser	Glu	Leu 280	Gly	Asp	Gly	Gly	Gln 285	Ser	Glu	Asn
Gln	Lys 290	Pro	Leu	Phe	Ile	Leu 295	Glu	Asp	Gly	Ala	Ser 300	Leu	Lys	Asn	Val
Thr 305	Met	Gly	Asp	Asp	Gly 310	Ala	Asp	Gly	Ile	His 315	Leu	Tyr	Gly	Asp	Ala 320
Lys	Ile	Asp	Asn	Leu 325	His	Val	Thr	Asn	Val 330	Gly	Glu	Asp	Ala	Ile 335	Thr
Val	Lys	Pro	Asn 340	Ser	Ala	Gly	Lys	Lys 345	Ser	His	Val	Glu	Ile 350	Thr	Asn
Ser	Ser	Phe 355	Glu	His	Ala	Ser	Asp 360	Lys	Ile	Leu	Gln	Leu 365	Asn	Ala	Asp
Thr	Asn 370	Leu	Ser	Val	Asp	Asn 375	Val	Lys	Ala	Lys	Asp 380	Phe	Gly	Thr	Phe
Val 385	Arg	Thr	Asn	Gly	Gly 390	Gln	Gln	Gly	Asn	Trp 395	Asp	Leu	Asn	Leu	Ser 400
His	Ile	Ser	Ala	Glu 405	Asp	Gly	Lys	Phe	Ser 410	Phe	Val	Lys	Ser	Asp 415	Ser

```
Glu Gly Leu Asn Val Asn Thr Ser Asp Ile Ser Leu Gly Asp Val Glu
            420
                                425
Asn His Tyr Lys Val Pro Met Ser Ala Asn Leu Lys Val Ala Glu
        435
                            440
<210> 6
<211> 1344
<212> DNA
<213> Erwinia amylovora
<400> 6
atgtcaattc ttacgcttaa caacaatacc tcgtcctcgc cgggtctgtt ccagtccggg 60
ggggacaacg ggcttggtgg tcataatyca aattctgcgt tggggcaaca acccatcgat 120
cggcaaacca ttgagcaaat ggctcaatta ttggcggaac tgttaaagtc actgctatcg 180
ccacaatcag gtaatgegge aaccggagee ggtggeaatg accagactae aggagttggt 240
aacgctggcg gcctgaacgg acgaaaaggc acagcaggaa ccactccgca gtctgacagt 300
cagaacatgc tgagtgagat gggcaacaac gggctggatc aggccatcac gcccgatggc 360
cagggcggcg ggcagatcgg cgataatcct ttactgaaag ccatgctgaa gcttattgca 420
cgcatgatgg acggccaaag cgatcagttt ggccaacctg gtacgggcaa caacagtgcc 480
tetteeggta ettetteate tggeggttee cettttaacg atetateagg ggggaaggee 540
ccttccggca actcccttc cggcaactac tctcccgtca gtaccttctc acccccatcc 600
acgccaacgt cccctacctc accgcttgat ttcccttctt ctcccaccaa agcagccggg 660
ggcagcacgc cggtaaccga tcatcctgac cctgttggta gcgcgggcat cggggccgga 720
aattcggtgg ccttcaccag cgccggcgct aatcagacgg tgctgcatga caccattacc 780
gtgaaagcgg gtcaggtgtt tgatggcaaa ggacaaacct tcaccgccgg ttcagaatta 840
ggcgatggcg gccagtctga aaaccagaaa ccgctgttta tactggaaga cggtgccagc 900
ctgaaaaacg tcaccatggg cgacgacggg gcggatggta ttcatcttta cggtgatgcc 960
aaaatagaca atctgcacgt caccaacgtg ggtgaggacg cgattaccgt taagccaaac 1020
agegegggea aaaaateeca egttgaaate actaacagtt eettegagea egeetetgae 1080
aagateetge agetgaatge egatactaac etgagegttg acaaegtgaa ggecaaagae 1140
tttggtactt ttgtacgcac taacggcggt caacagggta actgggatct gaatctgagc 1200
catatcagcg cagaagacgg taagttctcg ttcgttaaaa gcgatagcga ggggctaaac 1260
gtcaatacca gtgatatctc actgggtgat gttgaaaacc actacaaagt gccgatgtcc 1320
gccaacctga aggtggctga atga
                                                                  1344
<210> 7
<211> 341
<212> PRT
<213> Pseudomonas syringae
<400> 7
Met Gln Ser Leu Ser Leu Asn Ser Ser Ser Leu Gln Thr Pro Ala Met
```

- Ala Leu Val Leu Val Arg Pro Glu Ala Glu Thr Thr Gly Ser Thr Ser 20 25 30
- Ser Lys Ala Leu Gln Glu Val Val Val Lys Leu Ala Glu Glu Leu Met 35 40 45
- Arg Asn Gly Gln Leu Asp Asp Ser Ser Pro Leu Gly Lys Leu Leu Ala
 50 55 60
- Lys Ser Met Ala Ala Asp Gly Lys Ala Gly Gly Gly Ile Glu Asp Val 65 70 75 80
- Ile Ala Ala Leu Asp Lys Leu Ile His Glu Lys Leu Gly Asp Asn Phe 85 90 95
- Gly Ala Ser Ala Asp Ser Ala Sér Gly Thr Gly Głn Głn Asp Leu Met 100 105 110
- Thr Gln Val Leu Asn Gly Leu Ala Lys Ser Met Leu Asp Asp Leu Leu 115 120 125
- Thr Lys Gln Asp Gly Gly Thr Ser Phe Ser Glu Asp Asp Met Pro Met 130 135
- Leu Asn Lys Ile Ala Gln Phe Met Asp Asp Asn Pro Ala Gln Phe Pro 145 150 155 160
- Lys Pro Asp Ser Gly Ser Trp Val Asn Glu Leu Lys Glu Asp Asn Phe 165 170 175
- Leu Asp Gly Asp Glu Thr Ala Ala Phe Arg Ser Ala Leu Asp Ile Ile 180 185 190
- Gly Gln Gln Leu Gly Asn Gln Gln Ser Asp Ala Gly Ser Leu Ala Gly 195 200 205
- Thr Gly Gly Gly Leu Gly Thr Pro Ser Ser Phe Ser Asn Asn Ser Ser 210 215 220
- Val Met Gly Asp Pro Leu Ile Asp Ala Asn Thr Gly Pro Gly Asp Ser 225 230 230 235 240
- Gly Asn Thr Arg Gly Glu Ala Gly Gln Leu Ile Gly Glu Leu Ile Asp 245 250 255
- Arg Gly Leu Gln Ser Val Leu Ala Gly Gly Gly Leu Gly Thr Pro Val 260 265 270

Asn Thr Pro Gln Thr Gly Thr Ser Ala Asn Gly Gly Gln Ser Ala Gln 275 280 285 Asp Leu Asp Gln Leu Leu Gly Gly Leu Leu Leu Lys Gly Leu Glu Ala 295 300 Thr Leu Lys Asp Ala Gly Gln Thr Gly Thr Asp Val Gln Ser Ser Ala 310 315 Ala Gln Ile Ala Thr Leu Leu Val Ser Thr Leu Leu Gln Gly Thr Arq 325 330 Asn Gln Ala Ala Ala 340 <210> 8 <211> 1026 <212> DNA <213> Pseudomonas syringae <400> 8 atgcagagtc tcagtcttaa cagcagctcg ctgcaaaccc cggcaatggc ccttgtcctg 60 gtacgtcctg aagccgagac gactggcagt acgtcgagca aggcgcttca ggaagttgtc 120 gtgaagctgg ccgaggaact gatgcgcaat ggtcaactcg acgacagctc gccattggga 180 aaactgttgg ccaagtcgat ggccgcagat ggcaaggcgg gcggcggtat tgaggatgtc 240 atcgctgcgc tggacaagct gatccatgaa aagctcggtg acaacttcgg cgcgtctgcg 300 aagtcgatgc tcgatgatct tctgaccaag caggatggcg ggacaagctt ctccgaagac 420 gatatgccga tgctgaacaa gatcgcgcag ttcatggatg acaatcccgc acagtttccc 480 aagccggact cgggctcctg ggtgaacgaa ctcaaggaag acaacttcct tgatggcgac 540 gaaacggctg cgttccgttc ggcactcgac atcattggcc agcaactggg taatcagcag 600 agtgacgctg gcagtctggc agggacgggt ggaggtctgg gcactccgag cagtttttcc 660 aacaactcgt ccgtgatggg tgatccgctg atcgacgcca ataccggtcc cggtgacagc 720 ggcaataccc gtggtgaagc ggggcaactg atcggcgagc ttatcgaccg tggcctgcaa 780 teggtattgg ceggtggtgg actgggcaca ceegtaaaca ceeegcagae eggtaegteg 840 gcgaatggcg gacagtccgc tcaggatctt gatcagttgc tgggcggctt gctgctcaag 900 ggcctggagg caacgctcaa ggatgccggg caaacaggca ccgacgtgca gtcgagcgct 960 gegeaaateg ceacettget ggteagtacg etgetgeaag geaceegeaa teaggetgea 1020 gcctga 1026 <210> 9 <211> 424 <212> PRT <213> Pseudomonas syringae

<400> 9

Met Ser Ile Gly Ile Thr Pro Arg Pro Gln Gln Thr Thr Pro Leu Asp Phe Ser Ala Leu Ser Gly Lys Ser Pro Gln Pro Asn Thr Phe Gly Glu Gln Asn Thr Gln Gln Ala Ile Asp Pro Ser Ala Leu Leu Phe Gly Ser Asp Thr Gln Lys Asp Val Asn Phe Gly Thr Pro Asp Ser Thr Val Gln Asn Pro Gln Asp Ala Ser Lys Pro Asn Asp Ser Gln Ser Asn Ile Ala Lys Leu Ile Ser Ala Leu Ile Met Ser Leu Leu Gln Met Leu Thr Asn Ser Asn Lys Lys Gln Asp Thr Asn Gln Glu Gln Pro Asp Ser Gln Ala Pro Phe Gln Asn Asn Gly Gly Leu Gly Thr Pro Ser Ala Asp Ser Gly Gly Gly Gly Thr Pro Asp Ala Thr Gly Gly Gly Gly Asp Thr Pro Ser Ala Thr Gly Gly Gly Gly Asp Thr Pro Thr Ala Thr Gly Gly Gly Gly Ser Gly Gly Gly Thr Pro Thr Ala Thr Gly Gly Gly Ser Gly Gly Thr Pro Thr Ala Thr Gly Gly Gly Gly Gly Val Thr Pro Gln Ile Thr Pro Gln Leu Ala Asn Pro Asn Arg Thr Ser Gly Thr Gly Ser Val Ser Asp Thr Ala Gly Ser Thr Glu Gln Ala Gly Lys Ile Asn Val Val Lys Asp Thr Ile Lys Val Gly Ala Gly Glu Val Phe Asp

Gly His Gly Ala Thr Phe Thr Ala Asp Lys Ser Met Gly Asn Gly Asp

14

```
Gln Gly Glu Asn Gln Lys Pro Met Phe Glu Leu Ala Glu Gly Ala Thr
             260
                                 265
                                                      270
Leu Lys Asn Val Asn Leu Gly Glu Asn Glu Val Asp Gly Ile His Val
        275
                             280
                                                  285
Lys Ala Lys Asn Ala Gln Glu Val Thr Ile Asp Asn Val His Ala Gln
                         295
                                              300
Asn Val Gly Glu Asp Leu Ile Thr Val Lys Gly Glu Gly Gly Ala Ala
                     310
                                         315
.Val Thr Asn Leu Asn Ile Lys Asn Ser Ser Ala Lys Gly Ala Asp Asp
                325
                                     330
                                                          335
Lys Val Val Gln Leu Asn Ala Asn Thr His Leu Lys Ile Asp Asn Phe
            340
                                 345
                                                      350
Lys Ala Asp Asp Phe Gly Thr Met Val Arg Thr Asn Gly Gly Lys Gln
        355
                             360
                                                  365
Phe Asp Asp Met Ser Ile Glu Leu Asn Gly Ile Glu Ala Asn His Gly
    370
                         375
                                             380
Lys Phe Ala Leu Val Lys Ser Asp Ser Asp Leu Lys Leu Ala Thr
385
                     390
                                         395
                                                              400
Gly Asn Ile Ala Met Thr Asp Val Lys His Ala Tyr Asp Lys Thr Gln
                405
                                     410
```

Ala Ser Thr Gln His Thr Glu Leu 420

<210> 10 <211> 1729 <212> DNA <213> Pseudomonas syringae

<400> 10

tccacttcgc tgattttgaa attggcagat tcatagaaac gttcaggtgt ggaaatcagg 60 ctgagtgcgc agatttcgtt gataagggtg tggtactggt cattgttggt catttcaagg 120 cctctgagtg cggtgcggag caataccagt cttcctgctg gcgtgtgcac actgagtcgc 180 aggcataggc atttcagttc cttgcgttgg ttgggcatat aaaaaaagga acttttaaaa 240 acagtgcaat gagatgccgg caaaacggga accggtcgct gcgctttgcc actcacttcg 300 agcaagctca accccaaaca tccacatccc tatcgaacgg acagcgatac ggccacttgc 360 tctggtaaac cctggagctg gcgtcggtcc aattgccac ttagcgaggt aacgcagcat 420 gagcatcggc atcacaccc ggccgcaaca gaccaccacg ccactcgatt tttcggcgct 480

```
aagcggcaag agtcctcaac caaacacgtt cggcgagcag aacactcagc aagcgatcga 540
cccgagtgca ctgttgttcg gcagcgacac acagaaagac gtcaacttcg gcacgcccga 600
cagcaccgtc cagaatccgc aggacgccag caagcccaac gacagccagt ccaacatcgc 660
taaattgatc agtgcattga tcatqtcgtt gctgcagatg ctcaccaact ccaataaaaa 720
gcaggacace aatcaggaac ageetgatag ecaggeteet ttecagaaca aeggegget 780
cggtacaccg tcggccgata gcgggggcgg cggtacaccg gatgcgacag gtggcggcgg 840
cggtgatacg ccaagcgcaa caggcggtgg cggcggtgat actccgaccg caacaggcgg 900
tggcggcagc ggtggcggcg gcacacccac tgcaacaggt ggcggcagcg gtggcacacc 960
cactgcaaca ggcggtggcg agggtggcgt aacaccgcaa atcactccgc agttggccaa 1020
ccctaaccgt acctcaggta ctggctcggt gtcggacacc gcaggttcta ccgagcaagc 1080
cggcaagatc aatgtggtga aagacaccat caaggtcggc gctggcgaag tctttgacgg 1140
ccacggcgca accttcactg ccgacaaatc tatgggtaac ggagaccagg gcgaaaatca 1200
gaagcccatg ttcgagctgg ctgaaggcgc tacgttgaag aatgtgaacc tgggtgagaa 1260
cgaggtcgat ggcatccacg tgaaagccaa aaacgctcag gaagtcacca ttgacaacgt 1320
gcatgcccag aacgtcggtg aagacctgat tacggtcaaa ggcgagggag gcgcagcggt 1380
cactaatetg aacateaaga acageagtge caaaggtgea gaegacaagg ttgteeaget 1440
caacgccaac actcacttga aaatcgacaa cttcaaggcc gacgatttcg gcacgatggt 1500
tegeaceaac ggtggeaage agtttgatga catgageate gagetgaaeg geategaage 1560
taaccacggc aagttcgccc tggtgaaaag cgacagtgac gatctgaagc tggcaacggg 1620
caacatcgcc atgaccgacg tcaaacacgc ctacgataaa acccaggcat cgacccaaca 1680
caccgagett tgaatccaga caagtagett gaaaaaaggg ggtggaete
                                                                  1729
```

```
<210> 11 <211> 344
```

<212> PRT

<213> Ralstonia solanacearum

<400> 11

Met Ser Val Gly Asn Ile Gln Ser Pro Ser Asn Leu Pro Gly Leu Gln
1 5 10 15

Asn Leu Asn Leu Asn Thr Asn Thr Asn Ser Gln Gln Ser Gly Gln Ser 20 25 30

Val Gln Asp Leu Ile Lys Gln Val Glu Lys Asp Ile Leu Asn Ile Ile 35 40 · 45

Ala Ala Leu Val Gln Lys Ala Ala Gln Ser Ala Gly Gly Asn Thr Gly 50 55 60

Asn Thr Gly Asn Ala Pro Ala Lys Asp Gly Asn Ala Asn Ala Gly Ala 65 70 75 80

Asn Asp Pro Ser Lys Asn Asp Pro Ser Lys Ser Gln Ala Pro Gln Ser 85 90 95

Ala Asn Lys Thr Gly Asn Val Asp Asp Ala Asn Asn Gln Asp Pro Met

			100					105					110		
Gln	Ala	Leu 115	Met	Gln	Leu	Leu	Glu 120	Asp	Leu	Val	Lys	Leu 125	Leu	Lys	Ala
Ala	Leu 130	His	Met	Gln	Gln	Pro 135	Gly	Gly	Asn	Asp	Lys 140	Gly	Asn	Gly	Val
Gly 145	Gly	Ala	Asn	Gly	Ala 150	Lys	Gly	Ala	Gly	Gly 155	Gln	Gly	Gly	Leu	Ala 160
Glu	Ala	Leu	Gln	Glu 165	Ile	Glu	Gln	Ile	Leu 170	Ala	Gln	Leu	Gly	Gly 175	Gly
Gly	Ala	Gly	Ala 180	Gly	Gly	Ala	Gly	Gly 185	Gly	Val	Gly	Gly	Ala 190	Gly	Gly
Ala	Asp	Gly 195	Gly	Ser	Gly	Ala	Gly 200	Gly	Ala	Gly	Gly	Ala 205	Asn	Gly	Ala
Asp	Gly 210	Gly	Asn	Gly	Val	Asn 215	Gly	Asn	Gln	Ala	Asn 220	Gly	Pro	Gln	Asn
Ala 225	Gly	Asp	Val	Asn	Gly 230	Ala	Asn	Gly	Ala	Asp 235	Asp	Gly	Ser	Glu	Asp 240
Gln	Gly	Gly	Leu	Thr 245	Gly	Val	Leu	Gln	Lys 250	Leu	Met	Lys	Ile	Leu 255	Asn
Ala	Leu	Val	Gln 260	Met	Met	Gln	Gln	Gly 265	Gly	Leu	Gly	Gly	Gly 270	Asn	Gln
Ala	Gln	Gly 275	Gly	Ser	Lys	Gly	Ala 280	Gly	Asn	Ala	Ser	Pro 285	Ala	Ser	Gly
Ala	Asn 290	Pro	Gly	Ala	Asn	Gln 295	Pro	Gly	Ser	Ala	Asp 300	Asp	Gln	Ser	Ser
Gly 305	Gln	Asn	Asn	Leu	Gln 310	Ser	Gln	Ile	Met	Asp 315	Val	Val	Lys	Glu	Val 320
Val	Gln	Ile	Leu	Gln 325	Gln	Met	Leu	Ala	Ala 330	Gln	Asn	Gly	Gly	Ser 335	Gln
Gln	Ser	Thr	Ser 340	Thr	Gln	Pro	Met								

```
<210> 12
<211> 1035
<212> DNA
<213> Ralstonia solanacearum
<400> 12
atgtcagtcg gaaacatcca gagcccgtcg aacctcccgg gtctgcagaa cctgaacctc 60
aacaccaaca ccaacagcca gcaatcgggc cagtccgtgc aagacctgat caagcaggtc 120
gagaaggaca tootcaacat catogoagco otogtgoaga aggoogcaca gtoggogggo 180
ggcaacaccg gtaacaccgg caacgcgccg gcgaaggacg gcaatgccaa cgcgggcgcc 240
aacgacccga gcaagaacga cccgagcaag agccaggctc cgcagtcggc caacaagacc 300
ggcaacgtcg acgacgccaa caaccaggat ccgatgcaag cgctgatgca gctgctggaa 360
gacctggtga agctgctgaa ggcggccctg cacatgcagc agcccggcgg caatgacaag 420
ggcaacggcg tgggcggtgc caacggcgcc aagggtgccg gcggccaggg cggcctggcc 480
gaagegetge aggagatega geagateete geeeageteg geggeggegg tgetggegee 540
ggcggcgcgg gtggcggtgt cggcggtgct ggtggcgcgg atggcggctc cggtgcgggt 600
ggcgcaggcg gtgcgaacgg cgccgacggc ggcaatggcg tgaacggcaa ccaggcgaac 660
ggcccgcaga acgcaggcga tgtcaacggt gccaacggcg cggatgacgg cagcgaagac 720
cagggcgcc tcaccggcgt gctgcaaaag ctgatgaaga tcctgaacgc gctggtgcag 780
atgatgcage aaggeggeet eggeggegge aaccaggege agggeggete gaagggtgee 840
ggcaacgcct cgccggcttc cggcgcgaac ccgggcgcga accaqcccgg ttcggcqgat 900
gatcaatcgt ccggccagaa caatctgcaa tcccagatca tggatgtggt gaaggaggtc 960
gtccagatcc tgcagcagat gctggcggcg cagaacggcg gcagccagca gtccacctcg 1020
acgcagccga tgtaa
                                                                   1035
<210> 13
<211> 114
<212> PRT
<213> Xanthomonas campestris
<400> 13
Met Asp Ser Ile Gly Asn Asn Phe Ser Asn Ile Gly Asn Leu Gln Thr
Met Gly Ile Gly Pro Gln Gln His Glu Asp Ser Ser Gln Gln Ser Pro
             20
                                 25
Ser Ala Gly Ser Glu Gln Gln Leu Asp Gln Leu Leu Ala Met Phe Ile
         35
                             40
                                                 45
Met Met Leu Gln Gln Ser Gln Gly Ser Asp Ala Asn Gln Glu Cys
    50
                         55
                                             60
Gly Asn Glu Gln Pro Gln Asn Gly Gln Glu Gly Leu Ser Pro Leu
65
                     70
                                         75
                                                             80
Thr Gln Met Leu Met Gln Ile Val Met Gln Leu Met Gln Asn Gln Gly
```

85 90 95

Gly Ala Gly Met Gly Gly Gly Ser Val Asn Ser Ser Leu Gly Gly 100 105 110

Asn Ala

<210> 14

<211> 342

<212> DNA

<213> Xanthomonas campestris

<400> 14